FORM MR-1
(Revised November 1984)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
Telephone: (801) 538-5340

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS and MINING AND RECLAMATION PLAN

Based on Provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Regulations and Rules of Practice and Procedures, By Order of the Board of Oil, Gas and Mining.

Mine Name: Quarry Antone Mine Plan Date: 4/17/86

File No.: ACT/____/____ Date Received: _____

Operator: Utah Portland Quarries, Inc. DOGM Lead Reviewer: _____

Mineral(s) to be Mined: shale

Please attach other sheets as needed and include cross-reference page numbers when used.

1. Name of Applicant or Company: Utah Portland Quarries, Inc.
   Corporation (X) Partnership ( ) Individual ( )

2. Address: Permanent: 615 West 8th South, Salt Lake City, UT
   P.O. Box 1469, Salt Lake City, UT 84110
   Temporary: _____

3. Company Representative: Name: Tom Saunders
   Title: Plant Manager
   Address: P.O. Box 1469, S.L.C. UT 84110 Phone: (801) 328-4891

4. Location of Operation: County(ies) Tooele

Township(s):	2 S.	Range(s):	6 W.	Section(s):	NE 1/4 18
Township(s):		Range(s):		Section(s):	NW 1/4 17
Township(s):		Range(s):		Section(s):	SW 1/4 8

5. Owner(s) of record of the surface area within the land to be affected:

Name:	Utah Portland Quarries, Inc.	Address:	P.O. Box 1469, S.L.C. UT 84110
Name:		Address:	
Name:		Address:	
Name:		Address:	

6. Owner(s) of record of the minerals to be mined:

Name:	Utah Portland Quarries, Inc.	Address:	P. O. Box 1469, S.L.C. UT 84110
Name:		Address:	
Name:		Address:	
Name:		Address:	

7. Owner(s) of record of all other minerals, including oil and gas, within any part of the land to be affected:

Name:	None	Address:	
Name:		Address:	
Name:		Address:	

8. Have the above owners been notified in writing? ( ) Yes, ( ) No. If no, why not? N/A

9. Have you or any other person, partnership or corporation associated with you received an approval of a Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein? (X) Yes, ( ) No. If yes, list all approval numbers now under surety:

ACT/045/005

10. Source of Operator's legal right to enter and conduct operations on the land to be covered by this Notice:

Utah Portland Quarries ownership

11. Give the names and mailing addresses of every principal Executive, Office, Partner (or person performing a similar function) of Applicant:

	Name	Title	Address
A.	E.S. Gallacher	President	P.O. Box 1469, S.L.C. UT 84110
B.	Ashby S. Decker	Vice President	P.O. BOx 1469, S.L.C. UT 84110
C.			
D.			

12. Has the Applicant, any subsidiary or affiliate or any person, partnership, association, trust or corporation controlled by or under common control with the Applicant, or any person required to be identified by Item 11 ever had an approval of a Notice of Intention to Mine or Explore withdrawn or has surety relating thereto ever been forfeited? ( ) Yes, (X) No.

    If yes, please explain: _____

    _____

    _____

    _____

    _____

    _____

Please note: Section 40-8-13 of the Act provides that information relating to the location, size or nature of the deposit, and marked confidential by the Operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the Operator, or until the mining operation has been terminated as provided in Subsection (2) of Section 40-8-21 of the Act. This material should be so marked and included on separate cross-referenced sheets.

13. All maps and plans prepared for submission shall be of adequate scale and detail to show topographic features and clearly indicate the following details:

    A. Location and delineation of the extent of the land previously affected, as well as the proposed surface disturbance.
    B. Existing active or inactive, underground or surface mined areas.
    C. Boundaries of surface properties, including ownership.
    D. Names and locations of:
        (1) Lakes, rivers, streams, creeks and springs.
        (2) Roads, highways and buildings.
        (3) Active or abandoned facilities.
        (4) Transmission lines within 500 feet of the exterior limits of land affected.
        (5) Gas and/or oil pipelines.
        (6) Site elevation.
    E. Drainage patterns of land affected:
        (1) Overburden or topsoil removal and storage areas.
        (2) Areas susceptible to erosion.
        (3) Natural waterways.
        (4) Constructed drainages, diversions, berms and sediment ponds (design calculations shall be included).
        (5) Receiving waters (State Health classification).
        (6) Directional flow of all surface waters (indicated by arrows).
    F. Known drill holes:
        (1) Location.
        (2) Status.

(3) Depths and thicknesses of:*
   a. Water bearing strata.
   b. Mineral deposits.
   c. Toxic or potentially toxic materials. (None)
   d. Surficial or plant supporting material (topsoil and subsoil).

G. Locations of disposal and stockpile areas:
   (1) Topsoil and subsoil storage areas.
   (2) Overburden storage area.
   (3) Waste, tailings, rejected materials.
   (4) Raw ore stockpile(s).
   (5) Tailings-ponds and other sediment control structures.
   (6) Discharge points, water effluents (see #15[D]).

All maps should have a color code or other suitable legend used in preparation to clearly indicate surface features of the land affected. A general reference map completed on a 7.5 (1:24,000) USGS quadrangle sheet is recommended with additional large scale maps included for practical delineation of individual facilites, (e.g., 1:200, 1:500).

14. Acreage to be disturbed:

A. Minesite (operating, storage, disposal areas, etc.): 13.31 acres
B. Access/haul roads/conveyors: _____
C. Associated on-site processing facilities: _____

15. Describe mining method to be employed, including:

A. Mining sequence:
   (1) Map delineating the yearly sequential disturbance (if surface mine) and/or surficial disturbance.
   (2) Narrative (including on-site processing or mineral treatment):

#1, (A), TS #1
#2, (B), TS #2
C

Areas 1, 2, and 3 will be mined during 1985-86.
Areas 4, 5 and 6 will be mined during 1987-89.
Area 7 will be mined in 1990.
Topsoil will be removed and stockpiled in accordance with above schedule.
Surface disturbance and mining will be accomplished by ripping.
There will be no processing or mineral treatment.

Attach supplemental sheets and/or diagrams as necessary with cross reference to page number here: Map #1 .

*Stratigraphic or lithologic logs if correlated to footage depths may be presented when labeled (maps or logs should be labeled confidential, if so desired).

B. If sedimentary deposit seam(s):
(1) Thickness(es): 100' ±
(2) Dip: 70°
(3) Outcrop: None

C. Will any underground workings or aquifers be encountered? ( ) Yes, (X) No. If yes, describe potential impacts and protection measures to be taken:

D. Describe any active discharge or proposed discharge of water from mine or site area. Include water quality data and lab test reports. If attached sheets or reports are included, cross reference to page number here: ____.

None

16. Have all necessary water rights been appropriated? ( ) Yes, ( ) No. How will water be obtained? Please explain: N/A no water required except that brought in by truck for dust control.

17. Proposed or estimated duration of mining operation: 10 yrs. *
Will the permit term be for a lesser amount of time, subject to review? (e.g., for surety estimate reasons). (X) Yes, ( ) No. If yes, how long?
5 years * 1-3 month mining/yr.

18. Describe the construction and maintenance of access roads including:
A. Procedures (drainage and erosion control methods).
B. Cross section(s).
C. Profile(s) of proposed road grade(s).

Dirt road used for access to previous mine operation. This road has been graded and will be maintained during mine operation. An extension of this road has been built to access the mine area. See Map #1

Attach supplemental diagrams and cross reference to page number here: Map #1.

19. Prior land use(s): Wildlife/grazing/mining
Current land use(s): Quarrying/grazing
Possible projected or prospective future land use(s): Grazing

20. Describe methods of tree and brush removal: Stripping accomplished with loader and dozer - scraper.

Provide estimate of, and method of obtaining existing vegetation cover (%):

What types of dominant vegetation are present? Cross reference page 2

Photographs and/or maps may be attached to these forms, cross reference to page number here: _____.

21. Soils (surficial plant supportive material) and overburden: Except where slope or rocky terrain make it impossible, all surficial materials suitable as a growth medium shall be removed, segregated and stockpiled according to its ability to support vegetation (as determined by soil analysis and/or practial revegetation experience) prior to any major excavation. (Suggested minimum requirements are the top six inches, or the "A" horizon, whichever is larger.)

A. What is the pH range of the soil before mining? _____
Name of person or agency and method of determining pH: 7.7 U.S. EPA Method 3.2.2 Ford Chemical Lab.
Attach lab report if available. Cross reference page number here: 1.

B. Average depth of topsoil and subsoil to be stripped and stockpiled: 0 - 2'. Calculated volume of soil to be stockpiled: _____ See Map #1.

C. Describe the method for removing and stockpiling topsoil and subsoil, including measures to protect topsoil from wind and water erosion, compaction and pollutants: Removal by dozer and front end loader. Top soil to be stockpiled, compacted, rounded, and covered with shale/crushed limestone for protection against erosion.

D. Describe the method for removing and stockpiling overburden. Describe and discuss the acidity or alkalinity (pH) or other characteristics which would affect revegetation: _____
(a) Dozer and loader

(b) No negative effect from soil chemistry anticipated

E. Rock subjected to processing such as waste rock, tailings, etc., and which is to be disposed of on- or off-site must be subjected to a toxicity analysis. The method of determination, results and suitable disposal methods must be explained in detail, including means for containment and long range stability*:

No processing of material to be disposed of.
Materials are not toxic

22. Describe the methods used to minimize public safety and welfare hazards during and after mining operations including:

A. Shaft, tunnel and drill hole closure.
B. Disposal of trash, scrap metal and wood and extraneous debris, waste oil and solvents, unusable buildings and foundations, sewage and other materials incident to mining.
C. Posting of appropriate warning signs and/or fences or berms to act as barriers (e.g., above highwalls) in locations where public access is available.

A. N/A - No shafts, tunnels or adits exist at the site. Likewise, no drill holes exist on the property. Should drill holes be drilled, they would be properly plugged after use. No underground mining operations are planned. (Request variance)

B. Trash, scrap metal, misc. debris, waste oil/solvents will be collected and hauled from the site for proper landfill disposal. Sewage will be collected by portable chemical toilets. No permanent buildings or structures will be constructed at the site.

C. Signs will be posted at key locations to warn the public and workers of potential dangers, i.e., at access road entry, quarry area, crushing/loading area and equipment storage/use area. Proper signs will be installed upon mine closure to warn the public of potential dangers.

*"Toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.

23. Grading and soil redistribution.

A. Attach pre- and postmining contour cross sections, typical of regrading designs. Cross reference to page number here: Map # 2.

B. Describe the method(s) of overburden replacement and stabilization and highwall elimination, including: (a) slope factors; (b) lift heights; (c) compaction; (d) terracing, etc., (e) also include testing procedures:

A/B See Map 2. Regrading will be done to restore natural grade where possible around quarry but will not be feasible in mined-out area due to size of excavation and lack of sufficient topsoil (Request Variance)

B(a-d) Highwall will not be eliminated due to resultant high slope stability. (Ref: Adjacent mine site). Post mining highwall will remain near 45°.

B(e) If required, slope testing procedures can be used (seismic and/or slope indicator on a periodic basis).

C. What method of spreading topsoil and subsoil or upper horizon material on the regraded area will be employed? Dozer - front end loader

1. Indicate the approximate depth of soil cover after final surfacing 0 - 2' inches.
2. What tests will be performed to adequately evaluate the potential of the soil to successfully support intended revegetation? When required, after mine closure (Section), chemical "growability" test of CA, Mg, Na, Cond. and pH will be performed.
3. What soil amendments or fertilizers will be needed as an aid to revegetation?
   Type: None Rate:
   Type: Rate:
   Type: Rate:
4. What additional surface preparations will be used? Describe (a) drainage, erosion and sediment control measures; (b) maximum slope characteristics; and (c) highwall reclamation.

   N/A
   No reclamation is planned for the highwall since it will be solid rock. Limited overburden will be reclaimed, spread and compacted and covered with stockpiled topsoil in the areas around the mine-out zones. Both overburden and topsoil quantities are limited.

5. Describe methods which may be particularly applicable to waste disposal areas determined to be potential problem areas.

No overburden material will be disposed of off-site. Low grade rock materials will be stockpiled on-site for future reclamation. No wastes will be generated.

D. Describe plans for either leaving or reclaiming the roads and pads associated with the operation.

Pad areas will be reclaimed by removing the overburden to the original grade and revegatating with the appropriate plants. Local mine site roads will be scarafied and covered with top-soil and revegatated.

24. Impoundments: All evaporation, tailings and sediment ponds; spoil piles, fills, pads and regraded areas shall be self-draining and nonimpounding when abandoned unless previously approved as an impounding facility by a lawful state or federal agency. In view of this, please describe the reclamation of all related areas in the operation and include pertinent items enumerated in C, 1-5 above.

No evaporation, tailings or sediment ponds are planned for the mine area. Spoil piles, fills, pads and regraded areas shall be constructed as free draining and nonimpounding due to the coarse, crushed nature of the materials. Such areas will be reclaimed as required. Some natural drainages exist on the site that do show erosion potential. However, these areas will not be disturbed by any mining activity.

25. Revegetation plans:

A. What organization, agency or person will specifically be performing the revegetation? Utah Portland Quarries Inc. & U.S. Soil Cons. Service

B. Will the affected area be subject to livestock or wildlife grazing? (X) Yes, ( ) No. Will vegetation protection be needed to allow for a determination of the successful revegetation criteria outlined in the Mined Land Reclamation Act, Rule M-10(12)? ( ) Yes, (X) No. If yes, what measures will the operator take?

UPQ will work closely with DOGM to insure regulations are met

C. Will irrigation be used? ( ) Yes, (X) No. Type: _____. For how long? _____.

D. Test plots initiated during the early stages of mine development provide good bases from which a successful revegetation program can be adapted for later implementation. Will test plots be employed? ( ) Yes, (X) No. If yes, describe on an additional sheet(s) and attach. Cross reference page number here and show location on facilities map: _____.

E. Please attach a revegetation plan and schedule including:
   1. Species to be used.
   2. Rate of seed application/acre.
   3. Season to be planted.
   4. Seedbed preparation techniques.
   5. Planting location, slope face direction, variability, method of application, covering, etc.
   6. Mulch and fertilizer application, if used.

Cross Reference
Page 2

F. Describe any other maintenance procedures which may be used, if needed, to guarantee successful revegetation:

26. Please provide a reclamation schedule including:

   A. Estimated time for construction.
   B. Estimated time for interim reclamation.
   C. Estimated duration of the mining operation.
   D. A time table for the accomplishment of each major step in the reclamation plans. Attach the schedule and cross reference to the page number here: _____.

27. A surety guarantee must be provided for the mining operation (see Rule M-5 Mined Land Reclamation Act). In calculating this amount, the Division will consider the following major steps based on the information provided in this report:

   A. Clean up and removal of structures.
   B. Backfilling, grading and contouring.
   C. Topsoil and subsoil redistribution and stabilization.
   D. Revegetation (i.e., preparation, seeding, mulching, irrigation).
   E. Labor.
   F. Safety and fencing.
   G. Monitoring, and reseeding if necessary.

   To assist the Division, the operator may attach a list of costs and factors which would satisfy these areas. Substantiation of these factors, i.e., unit costs and how they are derived, should accompany the list. Cross reference the page number here: 4.

28. A request for a variance from specific commitments to Rule M-10 (Reclamation Standards) of the Mined Land Reclamation Act may be submitted with adequate written justification. If after presentation of information adequately detailing the situation, a determination is made that finds a portion of the rule inapplicable, a variance may be granted by the Division.

I hereby commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined in Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

Rule	Category of Commitment	Variance Requested?
M-10(1)	Land Use	
M-10(2)	Public Safety and Welfare	
M-10(3)	Impoundments	
M-10(4)	Slopes	
M-10(5)	Highwalls	X
M-10(6)	Toxic Materials	X
M-10(7)	Roads and Pads	X
M-10(8)	Drainages	
M-10(9)	Structures and Equipment	
M-10(10)	Shafts and Portals	X
M-10(11)	Sediment Control	X
M-10(12)	Revegetation	X
M-10(13)	Dams	
M-10(14)	Soils	

I believe a variance is justified on a site-specific basis for the previous subsections of Rule M-10 as indicated. A narrative statement explaining these concerns is attached.

STATE OF Utah

COUNTY OF Tooele

I, R. Kronstadt, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: R. Kronstadt

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 31 day of Dec., 1986

Notary Public: Karen Sloat

My Commission Expires: Sept 1, 1989

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: (X) Yes ( ) No

MINE MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.

2. Map sheets should be of a reasonable size, not to exceed 48 inches on a side.

3. Maps must have a title block with:

   A. Map title.
   B. Name and address of permittee.
   C. Permit and amendment numbers.
   D. Annual report period.
   E. Scale, north arrow, contour interval, date of photography, etc.

4. All maps must show:

   A. Legal subdivisions.
   B. Permit area boundary clearly shown and labelled.
   C. Amendment areas clearly shown and labelled.
   D. Contour features.

5. The following features should all be clearly identified:

   A. Topsoil stockpiles (numbered and with volumes).
   B. Settling ponds and sediment control structures.
   C. Haul roads.
   D. Pits identified by location, name, number, etc.
   E. Ramps (numbered).
   F. Out-of-pit spoil dumps.
   G. All waste disposal sites including, but not limited to:
      1. Landfill sites.
      2. Carbonaceous waste dumps.
   H. Diversion ditches.
   I. Monitoring sites.

14050

VARIANCE JUSTIFICATION STATEMENTS
Mining and Reclamation Plan Application
for
Utah Portland Quarries, Inc.

Rule M-10(4), Slopes

As evidenced in several other past mine sites in the area where similar mining techniques were used, the slope stability of the remaining rock highwalls is very high with no evidence of significant failure. Also, the effectiveness or feasibility of slope stability control under these conditions would be highly questioned. Therefore, no need is envisioned to alter or eliminate the remaining rock highwalls. Likewise, no reclamation is planned for the highwall since it will be solid rock.

Rule M-10(6), Toxic Materials

No toxic materials are believed to exist or will be generated during mining operations. Existing rock formations are limestone, dolomite, shale and sandstone. No metalic or other mineral deposits are known to exist on the site. No solvents, chemicals or other processes are to be used which are toxic or could produce toxic wastes.

Rule M-10(7), Roads and Pads

Mine site roads and pads will be reclaimed by covering with a thin layer of topsoil and revegetated.

Rule M-10(10), Shafts and Portals

No shafts and portals exist at the site or are to be part of the planned mining operation. All mining is to be surface open-cut.

Rule M-10(11), Sediment Control

Because of the thin, approximately 12-inch thick, natural topsoil cover at the site, sediment control is not a problem in the mining area. Likewise, since little disturbance will result on adjacent areas, except where equipment and shale storage pads exist, no need for sediment erosional control is envisioned. Control of on-site areas out of the mining area is likewise not required since no impacts from the mining activity will occur. Floor of mined area will be resloped prior to vegetation

Rule M-10(12), Revegatation

A variance is requested for revegetation only within the mined-out area, on the highwall, as discussed previously under Rule M-10(5).

Rule M-10(13), Dams

Because of the low area precipitation, less than 10 inches per year, absence of major surface drainages or perennial streams and lack of need for process water, no dams are planned for the operation. Runoff collecting in the quarry will seep immediately into the fractured rock. Likewise, runoff will be contained by seepage through the piles and pads.

394(40